STUDIES IN THE NYSSONINE WASPS.

II. THE SUBGENERA OF SPHECIUS (HYMENOPTERA: SPHECIDAE: GORYTINI).

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Recently while making a study of the taxonomy and generic nomenclature of the Gorytine complex, there was an opportunity to survey the classification of the cicada-killers of the genus *Sphecius*. So far as I am aware, Rohwer[1] was the first to call attention to the fact that this genus belongs to the Nyssonids rather than to the Stizine-Bembicine group, although it is probably from some such ancestral type as this that these latter groups have evolved. *Sphecius* is unquestionably a Gorytine and according to the structure of the mesopleura and the head is related to *Tanyoprymnus* Cameron, albeit rather remotely. There is no basis, however, for creating a separate tribe for its reception as Rohwer has done.

Sphecius Dahlbom.

1844. *Sphecius* Dahlbom, Hymen. Europ., I, p. 154.
Type: *Sphex speciosus* Drury, 1773 [= *Sphecius speciosus* (Drury)]. (Monobasic).

1845. *Hogardia* Lepeletier, Hist. Nat. Insect., Hymen., III, p. 289.
Type: *Hogardia rufescens* Lepeletier, 1845 [= *Stizus Hogardii* Latreille, 1809 = *S.* (*Sphecius*) *Hogardii* (Latreille)]. (Absolute tautonymy.)

1879. *Sphecienus* Patton, Bull. U. S. Geol. Surv., V, p. 345.
Type: *Stizus nigricornis* Dufour, 1838 [= *Sphecienus nigricornis* (Dufour) = *Sphecius* (*Sphecienus*) *nigricornis* (Dufour)]. (Original designation.)

Within the genus there are several discrete groups. The typical *Sphecii,* of which *Hogardia* Lepeletier is a synonym, are to be found only in the New World. In 1879 Patton proposed *Sphecienus* for the reception of the Palaearctic species but subsequent authors have followed Handlirsch in suppressing Patton's name as a mere synonym of *Sphecius*. This has probably been due to the fact that Patton in his original description gave only the characters of the males. The females, however, possess characters quite as excellent as those of the males and I therefore feel there is ample evidence, as presented in the following analytical table, for retaining *Sphecienus* at least as a subgenus for the palaearctic species.

[1] Proc. U. S. Nat. Mus., 1921, LIX, p. 403.

However, if this course is followed, it is necessary to accord some recognition to the Malagasy, Æthiopian and Australian forms which constitute a distinct group somewhat intermediate between the typical New World *Sphecius* and the Palaearctic *Sphecienus*. While some of the characters of this complex may seem at first glance to be rather trivial ones, nevertheless, I feel certain, particularly in view of the geographic distribution of the group, that it merits subgeneric rank.

Nothosphecius new subgenus

Type: *Stizus grandidieri* Saussure, 1887.

The diagnostic pattern of *Nothosphecius* is a very interesting one. The males seem to be midway between *Sphecienus* and *Sphecius,* having in common with the former the curved and excavate last flagellar article and agreeing with the latter in the simple middle metatarsi. The females, on the other hand, seem to be more closely related to *Sphecius* than to *Sphecienus,* possessing in common with the former the same type of calcaria on the hind tibiae. The females of *Nothosphecius,* however, may be readily distinguished from those of *Sphecius* by the fact that only the first segment of the middle tarsus is asymmetrical whereas in *Sphecius* the first two segments are asymmetrical. Moreover, the disc of the clypeus of *Nothosphecius* is flattened and bevelled laterally, while in *Sphecius* the clypeus is tumid discally with little or no suggestion of medial flattening or lateral bevelling.

The following analytical table will serve to characterize *Nothosphecius* and to differentiate it from *Sphecius* and *Sphecienus.*

Subgenera of *Sphecius.*

a. Males with the first segment of the middle tarsi simple and the last segment of the antennae simple, not excavate beneath, the last two segments as thick as the preceding segments of the flagellum; females with the calcaria of the hind tibiae flattened, the shorter one broad and spatulate, the longer one broad and strongly falciform, the first two segments of the middle tarsi strongly asymmetrical, produced outwardly at the apex and ending there in a thick spine; clypeus tumid discally; New World forms.
Sphecius Dahlbom.

b. Males with the first segment of the middle tarsi simple but with the last segment of the antennae excavate beneath and curved, the last two flagellar articles abruptly thinner than the preceding segments; females with the calcaria of

the hind tibiae quite similar to *Sphecius,* flattened, the shorter one spatulate, the longer one falciform, but with only the first segment of the middle tarsi strongly asymmetrical, produced outwardly at the apex and ending there in a thick spine, clypeus flat discally and bevelled off at the sides; Malagasy, Æthiopian and Australian forms.

Nothosphecius new subgenus.

c. Males with the first segment of the middle tarsi dilated basally, semicircularly excavate and with an unciform lamellate process, the last segment of the antennae curved and excavate beneath; females with the calcaria of the hind tibiae simple, acuminate, not flattened, clypeus somewhat flattened discally and slightly bevelled at the sides, first two segments of the middle tarsi strongly asymmetrical, produced outwardly at the apex and ending there in a thick spine; Palaearctic forms .....*Sphecienus* Patton.

BROOD 10.

This promises to be a boom year for seventeen-year locusts, so you might as well know all about them. We know all about them because we went over to Staten Island and talked with William T. Davis, a small, shy, grizzled man in his seventy-fourth year who has more knowledge of locusts than anybody else in the country, probably. Knows better than to call them locusts, for one thing. They're cicadas. The Biblical locusts which plagued Pharaoh were a species of grasshopper; the early Americans, weak on entomology and always on the lookout for portents, got cicadas and locusts mixed up. Cicadas aren't so dangerous to vegetation, Mr. Davis says. This year's batch of locusts (we'll call them that, because you and all your friends will, anyway) is known to the Department of Agriculture as Brood 10. That's the same Brood 10 that raised such hell around here back in 1919, getting wedged into the radiator fronts of automobiles, sticking on fresh paint, and falling into pans of Jell-O cooling on the back porch. Every cycle of locusts has its own number. They turn up every year, in one part of the country or another, but Brood 10 is about the most numerous in the East. It will be thick in Ohio, Indiana, parts of Illinois, New Jersey, and in some counties of New York: Columbia, Kings, Nassau, Queens, Richmond, and Suffolk. The insects aren't expected in the city, and if any strays appear the sparrows will take care of them. Birds are great enemies of locusts, and so are cats and pigs.